UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TEXAS 75202-2733

May 12, 2007

FINDING OF NO SIGNIFICANT IMPACT

To All Interested Agencies, Parties and Private Groups:

In accordance with the regulations of the Council on Environmental Quality at 40 Code of Federal Regulations, Part 1500, the U. S. Environmental Protection Agency (EPA), Region 6, has performed an environmental assessment of the following proposed action:

Proposed Action: Funding Assistance for the Proposed Water and Wastewater Systems Improvement Project for the Communities of Rio Bravo and Nuevo Progreso in the Municipality of Rio Bravo, in Tamaulipas, Mexico.

Applicant: Comisión Municipal de Agua Potable y Alcantarillado de Rio Bravo.

Proposed Project. The communities of Rio Bravo and Nuevo Progreso are in the Municipality of Rio Bravo, which is located across the Rio Grande from the city of Progreso, Hidalgo County, Texas. These communities do not have adequate wastewater treatment and collection systems, resulting in the discharge of untreated sewage to the Dren Rio Bravo and the Rio Grande. The communities also need a safe and adequate drinking water supply and distribution system to meet the demands arising from normal population growth, and to serve the approximate 26 percent of area residents currently without service. Occasional interruptions in service and/or low water pressure are experienced in parts of the two communities.

Rio Bravo proposes to construct a wastewater treatment plant (WWTP) on a 143-acre tract of land owned by the Comisión Municipal de Agua Potable y Alcantarillado de Rio Bravo (COMAPA de Rio Bravo). The WWTP would be an anaerobic, facultative, polishing lagoon system, and would include headworks with coarse screens, and sand settling chambers. Generated sludge would be removed from the anaerobic and facultative lagoons every 8.5 years and taken to a landfill for disposal. The treated effluent will be made available for agricultural reuse or discharged to the Canal Retamal at a point located north of the WWTP site. The proposed wastewater collection system for Rio Bravo would expand the collection network, construct new lift stations, a conveyance line parallel to Dren Rio Bravo, and rehabilitate collectors. Some of these projects were recently completed.

Nuevo Progreso would upgrade its existing WWTP or construct a new anaerobic, facultative, polishing lagoon system at the existing site. The treatment technology would be similar to that of Rio Bravo, but with less capacity and would require less land for construction.

Nuevo Progreso would also rehabilitate four subcollector lines, construct two new collector lines, a lift station and a force main. Wastewater collection and treatment service would be extended to all residents of the community.

Rio Bravo would expand the capacity of its water treatment plant (WTP) from 9.1 million gallons per day (MGD) to 14.8 MGD, and construct a raw water intake structure at the Anzaldúas Canal. Upgrade of the WTP is in process and installation of the intake structure was begun in 2006. Pumping stations and a water storage tank would be constructed and the distribution system would be extended to serve all areas of the communities. Nuevo Progreso added a third well in 2004 and plans to add three deep wells and rehabilitate the two older wells.

Findings. COMAPA de Rio Bravo, which manages and operates the water and wastewater systems in Rio Bravo and Nuevo Progreso, has applied to the Border Environment Cooperation Commission (BECC) for funding from the Border Environment Infrastructure Fund (BEIF) administered by the North American Development Bank (NADBank). The BEIF is funded in part by the EPA, and approval of the grant requires BECC certification, which involves an Environmental Assessment (EA) under the National Environmental Policy Act. The BECC and NADBank are charged with the identification, development, certification, and funding of water, wastewater, and other environmental infrastructure projects within 100 kilometers (62 miles) of the international boundary between the United States and Mexico. The Junta de Administración, Operación y Mantenimiento de Agua Potable y Alcantarillado de la Villa de Nuevo Progreso has some operational duties in Nuevo Progreso with oversight by COMAPA de Rio Bravo.

On the basis of the EA, the EPA, Region 6, has made a preliminary determination that the project is not a major federal action significantly affecting the quality of the human environment and that preparation of an Environmental Impact Statement (EIS) is not warranted. The project individually, cumulatively, or in conjunction with any other action will not have a significant adverse effect on the quality of the environment. Comments regarding this preliminary decision not to prepare an EIS and issue a Finding of No Significant Impact (FNSI) may be submitted to the U.S. Environmental Protection Agency, Office of Planning and Coordination (6EN-XP), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. All comments will be taken into consideration.

This preliminary decision and the FNSI will become final after the 30-day comment period expires if no new information is provided to alter this finding. No administrative action will be taken on this decision during the 30-day comment period. Copies of the EA and requests for review of the Administrative Record containing the information supporting this decision may be requested in writing at the above address, or by telephone at (214) 665-8150.

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Richard E. Greene
Regional Administrator

e: Rio Bravo/Nuevo Progreso BECC Project Finding of No Siginificant Impact

Enclosure

e: Rio Bravo/Nuevo Progreso BECC Project Finding of No Siginificant Impact

ENVIRONMENTAL ASSESSMENT
FOR THE PROPOSED FUNDING
FOR THE CITY OF RIO BRAVO, TAMAULIPAS, MEXICO
WATER AND WASTEWATER SYSTEMS IMPROVEMENT PROJECT
BORDER ENVIRONMENTAL INFRASTRUCTURE FUND

1.0 PROPOSED ACTION

1.1 Purpose and Need for Proposed Action. The communities of Rio Bravo and Nuevo Progreso are in the Municipality of Rio Bravo, which is located across the Rio Grande from the city of Progreso, Hidalgo County, Texas (Figures 1 and 2). Rio Bravo has had a water treatment plant (WTP) since 1980, which consists of two modules with six treatment trains, gravel and sand filters, and has a capacity of 9.1 million gallons per day (MGD). Approximately 2,819 residents (13 percent) of Rio Bravo and about 2,500 residents (26 percent) of Nuevo Progreso do not have potable water service (Figures 3 and 4). The lack of water storage and looping results in occasional service interruptions and/or low water pressure in parts of the two communities. Normal population growth has made it necessary to increase intake and treatment capacity at the Rio Bravo WTP, and increase the well capacity of Nuevo Progreso.

Rio Bravo does not have a wastewater treatment plant (WWTP) and residents use on-site systems for their wastewater treatment, posing a potential risk for contamination of the potable water lines and ground water resources. The storm sewer system has deteriorated and only about 37 percent of the population is connected to the municipal collection system, which has reverse slope, overflow, and obstruction problems. Wastewater generated in Rio Bravo is discharged to the Dren Rio Bravo without treatment. Approximately 30 percent of the population of Nuevo Progreso is connected to a collection system which flows to an existing WWTP built in 1982. The life cycle and design capacity of this plant was exceeded about 10 years ago, and the facilities have completely deteriorated and are out of service.

The Comisión Municipal de Agua Potable y Alcantarillado de la Ciudad de Rio Bravo (COMAPA) manages and operates the water and wastewater systems for Rio Bravo and Nuevo Progreso. The Junta de Administración, Operación y Mantenimiento de Agua Potable y Alcantarillado de la Villa de Nuevo Progreso has some operational duties in Nuevo Progreso with oversight from COMAPA de Rio Bravo. COMAPA has applied to the Border Environment Cooperation Commission (BECC) for funding from the Border Environment Infrastructure Fund (BEIF) administered by the North American Development Bank (NADBank). BECC and NADBank are charged with the identification, development, certification, and funding of water, wastewater, and other environmental infrastructure projects within 100 kilometers (62 miles) of the international boundary between Mexico and the United States (U.S.).

1.2 Proposed Action. Rio Bravo is expanding its WTP from 9.1 MGD to 14.8 MGD, and is constructing a raw water intake structure at the Anzaldúas Canal. The proposed action would expand the water distribution system to areas without service, and construct pumping stations

and a water tank. Nuevo Progreso added a third well in 2004 and plans to add three new deep wells and rehabilitate the two older deep wells.

Rio Bravo would construct a WWTP on a 143-acre tract of land owned by COMAPA. The WWTP would use an anaerobic, facultative, polishing lagoon system, including headworks with coarse screens, and sand settling chambers. The proposal would expand the wastewater collection network, construct new lift stations, a conveyance line parallel to Dren Rio Bravo, and rehabilitate collectors. Nuevo Progreso would upgrade its defunct WWTP or construct a new anaerobic, facultative, polishing lagoon system at the site. The treatment technology would be similar to that of Rio Bravo, but with less capacity and would require less land for construction. The collection system is about 25 years old and the lift station requires manual activation resulting in back-ups in the line to the lift station. Four subcollector lines would be rehabilitated, two new collector lines, a lift station, and force main would be constructed. The areas of Nuevo Progreso without wastewater collection service would be provided service and treatment at the central WWTP to be located north of the community.

Generated sludge would be removed from the anaerobic and facultative lagoons every 8.5 years and taken to a landfill for disposal. The treated effluent will be made available for agricultural reuse or discharged to the Canal Retamal at a point located north of the WWTP site. Some of these projects have been completed.

2.0 ALTERNATIVES

2.1 Alternatives Available to the EPA.

2.1.1 Approval for Grant Funding for the Project as Proposed. Depending on available funding, EPA can recommend approval of the grant for the proposed project without modification.

2.1.2 Approval for Grant Funding for a Modified Project. Information received during the EA process could result in identification of significant adverse impacts that would require modification of the project to mitigate the impacts. Modification of the project may allow the EPA to accept the project as modified and recommend approval of the grant funding.

2.1.3 Recommend Preparation of an EIS. A determination that the project as proposed could result in potentially significant adverse impacts to the environment that cannot be satisfactorily mitigated would preclude a recommendation of approval of the grant funding. The preparation of an Environmental Impact Statement (EIS) would then be recommended to evaluate the potentially significant impacts. The EIS process includes a scoping meeting to identify critical facts and issues, a Draft EIS, a public comment period on the Draft EIS, a public hearing on the Draft EIS, the Final EIS, a public comment period on the Final EIS, and a Record of Decision.

2.2 Alternatives Considered by the Applicant. Four alternatives were evaluated for both Rio Bravo and Nuevo Progreso, each of which includes a WTP and distribution system, and a WWTP and collection system. The Master Plan for Nuevo Progreso included three alternatives

for sewer collection, two alternatives for the WWTP, four alternatives for water distribution, and the No-action Alternative. The Master Plan for Rio Bravo included two alternatives for sewer collection, two alternatives for WWTP, three alternatives for water distribution, plus the No-action Alternative.

Alternatives considered but eliminated from further study included the use of anaerobic wastewater treatment lagoons without facultative and polishing lagoons because of the potential odor problem in proximity to the urban areas; construction of the Rio Bravo WWTP at an agricultural site on the Rodhe Canal because of the lack of a suitable discharge point and the necessity to pump the wastewater from Rio Bravo upgrade to the WWTP; construction of a non-mechanically aerated lagoon WWTP for both Rio Bravo and Nuevo Progreso because of the land area requirement; construction of a joint Rio Bravo-Nuevo Progreso WWTP because the high cost of pumping wastewater from Nuevo Progreso to the joint WWTP would outweigh any savings of a joint plant.

2.2.1 Alternative 1 - No-action Alternative. The No-action Alternative would not meet the purpose and need for the proposed project, and the construction, rehabilitation, repair or increase in capacity of the WWTPs would not be realized. Rio Bravo would not build the WWTP and would continue to discharge untreated wastewater to the irrigation ditches which flow into the Rio Grande. Wastewater from Nuevo Progreso would continue to back-up and accumulate at the pumping station and in the defunct lagoon system. The lagoon system does not have adequate liners and is without maintenance, dredging or cleaning. Untreated wastewater would continue to infiltrate into ground water sources or be discharged to open ditches.

2.2.2 Alternative 2 - The Preferred Alternative.

Wastewater Treatment. For Rio Bravo, the proposed action would construct an anaerobic, facultative, polishing lagoon WWTP system and would initially have a capacity of about 3.5 MGD, expanded to 7.8 MGD by the year 2025. Headworks with coarse screens, sand settling chambers, and five treatment trains would be built, each with two modules and a capacity of 1.6 MGD per treatment train. Three treatment trains would be constructed to meet the capacity expected for 2006. The fourth train would be constructed based on demand, with the fifth train constructed by 2010 to meet the design capacity for 2025. The initial plant would be a facultative treatment system, with aerated and polishing treatment added as demand increases.

For Nuevo Progreso, the proposal would construct a smaller anaerobic, facultative, polishing lagoon WWTP system. The proposed WWTP would initially have a capacity of about 0.25 MGD and expanded to 1.0 MGD by the year 2025. It would have three modules, each with a capacity of 0.32 MGD. The first module to be constructed will serve to meet the existing demand for wastewater treatment. A second and third module would be constructed to meet the design capacity for 2025. The WWTP would be built on 10.9 acres of the 17-acre site currently occupied by the existing lagoon system. The new lagoons would require an area of 2.7 acres. The old oxidation lagoons would either be replaced or upgraded for the new WWTP.

Generated Sludge Treatment and Disposal. Generated sludge from both WWTPs would be treated using extended aeration sludge treatment and would not require primary sedimentation or digestion beyond that provided in the aeration tank. The sludge would be accumulated for

digestion and stabilization and removed about every 8.5 years. It would be tested for compliance with the requirements for Class B non-hazardous sludge and disposed of at a landfill to be designed and built according to Mexican standards. The Rio Bravo WWTP would generate about 4.3 cubic yards per day of sludge, while the Nuevo Progreso WWTP would generate approximately 0.51 cubic yards per day of sludge. Hazardous sludge would be disposed according to the regulations for hazardous waste materials.

Wastewater Collection. For Rio Bravo, the proposed action would expand the wastewater collection system, rehabilitate collectors, construct new lift stations and a conveyance line parallel to Dren Rio Bravo to transport the wastewater by gravity flow to a lift station to be pumped to the WWTP. Rehabilitation of the Brecha, Cuahtemoc, Aldama, Bugambilias, Oaxaca, Guanajuato, and Mexico collectors has been completed.

For Nuevo Progreso, the proposed action would rehabilitate four subcollector lines, construct two new collector lines, and a lift station with an associated pressure transmission line to the new WWTP. The existing lift station would be abandoned. The expansion would provide collection service to about the 6,194 residents without service, in addition to providing for future growth.

The total cost for the collection systems for both Rio Bravo and Nuevo Progreso, including the works that have been completed, was estimated at $16,213,178(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

Water Treatment. This proposed action would expand the Rio Bravo WTP from 9.1 MGD to 14.8 MGD and construct a raw water intake structure at the Anzaldúas Canal. Treatment trains and backwash filters would be added to complement the six existing coagulation, sedimentation treatment trains and backwash sand filters. The intake structure would be adjacent to the existing intake structure and would include new pumps and pipeline. Directional drilling would be used to install the new pipeline under the highway between the Anzaldúas Canal and the WTP to avoid traffic disruptions during construction. Some upgrades to the WTP and installation of the intake structure have been initiated. The proposed project would have a an estimated total cost of $1,726,852(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

Nuevo Progreso would construct three new wells, each with its own adjoining 66,000-gallon elevated water storage tank, and the two older deep wells would be rehabilitated. A third well was drilled and equipped in 2004. The total cost for this alternative is estimated to be $125,410(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

Water Distribution. For Rio Bravo, the water distribution network would be upgraded and expanded to those areas without service, pumping stations and a water tank would be constructed, and the open loops would be closed. The upgrades to the existing distribution network, construction of interconnections, the water tank and associated lines have been completed. The expansion would provide water service to the 2,745 residences without service and would allow for future growth. The total cost for this alternative is estimated to be

$2,886,868(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

For Nuevo Progreso, the proposed action would expand the distribution network to provide potable water to the approximately 2,500 residents currently without service, and provide for future growth. The construction of 1.35 miles of 6-inch diameter pipelines to the Madero and Jardín de la Villa communities, and three miles of distribution lines, the drilling, equipping and startup of the third deep well have been completed. The total cost for the proposed action is estimated to be $1,572,323(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

2.2.3 Alternative 3 - Water and Wastewater Improvements Including Extended Aeration Activated Sludge WWTPs. The water treatment and distribution system for Rio Bravo and Nuevo Progreso would be the same as for Alternative 2. Wastewater treatment technology would use rotating biological contactor (RBC) wastewater treatment and have a build-out capacity of 7.76 MGD. Extended aeration activated sludge treatment would be used and constructed on the site proposed for construction of the WWTP under Alternative 2. Approximately 9.96 cubic yards per day of sludge would be produced at full capacity. For Nuevo Progreso, the RBC WWTP would be built on the site containing the existing treatment lagoons. Approximately 0.7 cubic yards per day of sludge would be produced at full capacity. Sludge production under Alternative 3 would be 10 to 25 times higher than it would be under Alternatives 2 or 4. Extended aeration activated sludge treatment would require clearance of 1.9 acres of land. The wastewater collection systems for Rio Bravo and Nuevo Progreso would be the same as those described for Alternative 2.

2.2.4 Alternative 4 - Water and Wastewater Improvements for Rio Bravo and Nuevo Progreso. Under this alternative, the water and wastewater improvements for Rio Bravo and Nuevo Progreso would be the same as for Alternative 2, but the wastewater treatment technology would be different. This alternative would use RBC wastewater treatment technology and would have a build-out treatment capacity of 7.76 MGD. The WWTP could be constructed on the same site as that proposed for the WWTP under Alternative 2. Approximately 8.7 cubic yards per day of sludge would be generated.

3.0 AFFECTED ENVIRONMENT

3.1 Land Resources.

3.1.1 Land Use. The community of Rio Bravo has an area of about 40,070 acres comprised of two percent residential, commercial, industrial and governmental uses, and about 98 percent occupied by cropland, pastureland, and rangeland mostly containing shrubs and brush. Land use in Nuevo Progreso also has some commercial, residential, and service sector uses. The general area consists mainly of cropland, pastureland and rangeland. Rio Bravo is located near coordinates 26° 00' 22"N latitude and 98° 08' 00"W longitude at elevations ranging from 80 to 120 feet mean sea level (msl). Nuevo Progreso is located near coordinates 26° 03' 40"N latitude and 97° 57' 38"W longitude at elevations ranging from 60 to 92 feet msl. Much of the construction activity would take place on previously disturbed land.

Under Alternative 2, land would be acquired for the new raw water intake and the WTP expansion in Rio Bravo, and for three new wells and water storage tanks in Nuevo Progreso. The WTP expansion requires an area of about 9,690 square feet. This land is owned by COMAPA de Rio Bravo and was formerly used for a basketball park. There would be temporary land disturbance for new and rehabilitated pipelines. Alternatives 3 and 4 would require land acquisition in both towns. Short-term impacts on land use from all the action alternatives would be related to minor disruption in traffic during work on roads, within easements and at the new plant sites. These impacts would cease after completion of construction activities. There would be no transboundary effects on land use for any of the alternatives.

3.1.2 Soils and Geology. The predominant soils in the proposed project area consist of Rio Grande-Matamoros-Camargo soils, formed on calcareous, clayey, and other alluvial sediments. These soils, which occupy Rio Grande terraces, riverbanks and active floodplains, have slopes ranging from 0 to 3 percent and are deep to very deep, moderately to well drained, and slow to moderately rapid permeability. These soils are considered prime farmland and have a medium potential for non-irrigated crops and a high potential for irrigated crops. Soils and geology in the U.S. would not be affected since all the earthwork would occur in Mexico. Alternative 1 would not affect land use since no construction would take place. Alternative 2 would require land acquisition only in Rio Bravo.

3.1.3 Sludge Production. The sludge generated will be tested for compliance with the requirements for Class B non-hazardous sludge and will be disposed of in a landfill to be constructed. Approximately 4.3 cubic yards per day of sludge would be produced at full build-out capacity. The extended aeration sludge treatment unit for Rio Bravo would be constructed on the site proposed for the WWTP site. For Nuevo Progreso, the sludge treatment drying beds would be constructed on land containing the existing treatment lagoons. Sludge drying beds would be used prior to final disposition of sludge. Hazardous sludge would be disposed according to the regulations for hazardous waste materials.

3.2 Water Resources.

3.2.1 Surface Water Resources. Rio Bravo draws its raw water from the Anzaldúas Dam which is located on the Rio Grande about 25 miles west of Rio Bravo. The Alamo and San Juan rivers are major tributaries to the Rio Grande on the Mexican side between the Falcon Dam and the gulf. The Marte R. Gómez Dam is located on the San Juan River between the municipalities of Camargo and Miguel Alemán. The Rio Grande below the Falcon Reservoir is in water quality segment No. 2302, which is designated a contact recreation, high aquatic life, and public water supply use segment. However, the segment is listed on the *Draft 2004 Texas Water Quality Inventory 303(d) List* as a Category 5c, impaired water body because of the bacteria levels which periodically exceed safe level for contact recreation[1].

[1] The segment either does not meet the applicable water quality standards or is threatened for one or more of the designated uses by one or more pollutants.

In 2000, that portion of the Rio Grande between the Anzaldúas Dam and the Gulf of Mexico was rated by the Comisión Nacional de Agua (CNA) as having unacceptable levels of bacteria. The maximum limits for contaminants in wastewater discharges into national waters and natural resources, and for treated wastewaters for use in public areas for Mexico are found at NOM-001-SEMARNAT-1996, NOM-003-SEMARNAT-1997, respectively.

Potential Impacts. The No-action Alternative would continue to pose a negative effect on surface waters in the area since untreated wastewater would continue to flow to the Dren Rio Bravo, the Laguna Madre and finally to the Gulf of Mexico. Leaks from latrines and ground water infiltration would continue and possibly worsen. The action alternatives would have a positive effect on surface water resources by eliminating or reducing the direct and indirect wastewater discharge to the Rio Grande. Treated effluent would be available for agricultural use and surplus effluent would be discharged to the Retamal canal system, to the Laguna Madre, and on to the Gulf of Mexico, approximately 68 miles from the point of discharge. Transboundary impacts to local and regional water resources would be positive as a result of the implementation of the action alternatives.

3.2.2 Ground Water. The proposed project area is across the Rio Grande from Hidalgo County, which lies over the Gulf Coast aquifer in Texas. The aquifer spans across 54 Texas counties along the coastline from Louisiana to Mexico. Water quality in the aquifer is typically good to the north of the San Antonio River Basin, while to the south towards Mexico, much of the ground water is unsuitable for irrigation because of high salinity and alkalinity. The Retama aquifer underlies an area of about 6 miles by 34 miles starting at Reynosa and extending towards Matamoros. According to the CNA, the aquifer is recharged at a rate of about 119,577 acre-feet per year through infiltration, irrigation return flows, and minor inflows from other aquifers. Little is known about the water quality in the unconfined Retama aquifer.

Potential Impacts. Under the No-action Alternative, leaks from latrines and ground water infiltration would continue and possibly worsen. Ground water contamination in Mexico would affect the waters of the U.S. from potential seepage into the Rio Grande from the shallow water tables. The proposed project would have a beneficial effect on ground water in Mexico. The action alternatives would eliminate or reduce the use of latrines, eliminate infiltration of sewage into the shallow water table, and the use of unlined canals which carry raw sewage. The rehabilitation of the collection lines would prevent leaks.

3.3 Air Resources.

3.3.1 Ambient Air Quality. Air quality data for the study area are limited due to the lack of a monitoring station. Progreso is just across the Rio Grande from the proposed project areas and is within the Brownsville-Laredo Intrastate Air Quality Control Region (AQCR) No. 213. There are no non-attainment areas in AQCR No. 213 areas for the criteria pollutants carbon monoxide, lead, ozone, particulate matter below 10 microns, or sulfur dioxide. Rio Bravo is about 53 miles

from the nearest weather station in Brownsville, Texas. Brownsville receives an average annual precipitation of 27.55 inches. The climate of Rio Bravo and Nuevo Progreso is drier than that of Brownsville because the communities are further inland. Winds in Brownsville are primarily from the southeast during February through November, and from the southeast mixed with frequent north-northwest breezes in December and January.

3.3.2 Mexican Air Regulations. The Mexican regulations at NOM-041-SEMARNAT-1999, NOM-045-SEMARNAT-1996, NOM-080-SEMARNAT-1994, and NOM-081-SEMARNAT-1994 contain the air quality regulations and set the maximum emissions limits for vehicles using gasoline and vehicles using diesel, and the maximum noise limits from motor vehicles and from fixed sources, respectively.

3.3.3 Potential Impacts. Under Alternative 1 there would not be any impacts since there would be no construction. Under the action alternatives, the construction activities would result in a temporary increase in noise, fugitive dust and particulate matter emission levels near the construction areas. Dust suppression techniques, such as watering and the application of soil stabilizers would be used as needed. Ambient air quality would return to normal at completion of construction activities. The ambient air quality may be improved by the elimination of odors in the immediate vicinity of existing latrines and the open canals carrying untreated wastewater. The primary odor improvements would be along the Dren Rio Bravo, at the existing wastewater treatment lagoons in Nuevo Progreso, and at individual homes and businesses with latrines. There would be no significant transboundary effects on air resources from fugitive dust or particulate matter. All construction would take place at least 660 feet south of the Rio Grande.

3.4 Biological Resources. Vegetation in the Reynosa area, which is west of the study area is classified in Mexico as being salt-tolerant vegetation, natural grassland, and cactus-related brush, which consists of shallow thorny brush and brush with few branches. In Rio Bravo the commonly found animals are white-wing doves, flocks of other wild birds, opossums, badgers, raccoons and coyotes.

Potential Impacts. Under the No-action Alternative, no biological resources would be affected since there would be no construction. However, the discharges of untreated wastewater to the Dren Rio Bravo, and eventually to the Rio Grande and Laguna Madre, would continue to have a negative effect on these water bodies. Most of the construction work under the action alternatives would take place on land that is either already disturbed or being used for cultivation. The proposed expansion site for the WTP was used for a basketball park, and at least one of the new WWTPs will be constructed on agricultural land which is regularly plowed. An improvement in water quality in the Dren Rio Bravo, the Rio Grande, and the Laguna Madre would improve the habitat for life in these water bodies.

3.5 Floodplain Management and Wetland Protection. Floodplains would not be affected under any of the alternatives. Construction activities would affect sites that are already developed, under cultivation, easements or road rights-of-way. Laguna Madre is the most significant wetland resource area. Elimination of the discharges of untreated wastewater from Rio Bravo to the Laguna Madre via Dren Rio Bravo, and from Nuevo Progreso into the

Rio Grande, would improve the water quality in the Laguna Madre wetland system. Any excess treated effluent not used for irrigation would be discharged to the Retamal Canal and eventually flow to the Laguna Madre wetland system.

3.6 Cultural Resources. According to the *Instituto Nacional de Antropología e Historia*, there are no cultural resources in the study area. In the event cultural materials are encountered during construction, work would be suspended in the immediate area of the discovery, and the appropriate authorities would be contacted for guidance. Work may continue in those project locations that are outside of the cultural resources discovery area. Since all proposed construction would occur in Mexico, historic and cultural resources in the U.S. would not be affected by any of the alternatives.

3.7 Socio-economics. A significant number of people cross the border daily to work, shop, attend school, visit, for social events, or medical reasons. The interdependency of the communities on both sides of the border potentially results in similar reactions to socio-economic and public health problems. The No-action Alternative would not alleviate these problems. The action alternatives would tend to improve the public health and socio-economics of both sides by eliminating the raw sewage in open canals and its use for agricultural irrigation, and by reducing the potential contamination of the potable water supply system and waterborne disease rates. Socio-economics may also be improved by the increased availability of water for reuse in irrigation. Municipal services in the U.S. would not be affected by any of the alternatives.
In 2005, the populations of Rio Bravo and Nuevo Progreso were estimated to be 91,491 and 9,384, respectively, and the minimum wage in the region was $4.21(US) per day at an exchange rate of 10.46 Mexican pesos per U.S. dollar.

3.8 Cumulative Effects. Other projects in the vicinity of Rio Bravo and Nuevo Progreso, in particular other water and wastewater projects, could potentially result in a beneficial cumulative effect on surface water quality through the reduction or elimination of the discharges of untreated wastewater to the Rio Grande. Also, the quality of the effluent used for crop irrigation would be improved, and potential transboundary impacts would be positive and tend to improve health and socioeconomic conditions in cities along both sides of the border. Potential BECC/NADBank funded projects currently in design or under construction include:

City of Roma Colonias Water and Wastewater Improvements.
City of Reynosa Comprehensive Sanitation Project.
City of Matamoros Comprehensive Water and Wastewater Project.
Donna Irrigation District Water Conservation Improvements.
Donna Water and Wastewater Improvements.
Harlingen Irrigation District Water Conservation Improvements.
Hidalgo and Cameron Counties Water Conservation Improvements.
La Feria Water and Wastewater Improvements.
Webb County Water and Wastewater Project (Laredo).
Nuevo Laredo Water and Wastewater Project.

3.9 Other Environmental Considerations.

3.9.1 Unavoidable Adverse Impacts. The No-action Alternative would not correct the existing sanitary and health problems resulting from the continued use of the potentially faulty septic systems and latrines to continue in the communities of Rio Bravo and Nuevo Progreso. These problems could have transboundary impacts. There is also the possibility that the water systems may not be able to meet future demand for water. The action alternatives would have temporary adverse impacts from dust and vehicle emissions, traffic disruption, noise, potential soil erosion during construction, and would result in the commitment of land resources for the construction. Temporary land disturbance would be necessary for rehabilitation and installation of new water and wastewater lines.

3.9.2 Relationship of Local Short-term Use of the Environment and the maintenance and Enhancement of Long-term Beneficial Uses. The No-action Alternative would appear to be the more economical alternative in the short-term, but the capital cost would tend to increase over the long-term if the improvements are delayed. The short-term commitment of resources under the action alternatives would temporarily increase dust, vehicle emissions, noise, and the possibility of soil erosion; there would be minor traffic disruption during work. These impacts would cease after completion of construction activities. Over the long-term, the action alternatives would provide better and more efficient water and wastewater service and improve the health and safety of the region with the elimination of the discharge of untreated wastewater into surface waters. The treated effluent would be reused for irrigation or discharged to Laguna Madre. There would be no discharge to the Rio Grande.

3.9.3 Irreversible and Irretrievable Commitments of Resources. Resources irreversibly and irretrievably committed would include the land resources in the communities of Rio Bravo and Nuevo Progreso, the materials, energy and financial resources used for construction and operation of the proposed project. The new WWTPs would be built on agricultural land and on land containing the existing lagoons in Nuevo Progreso. The WTP expansion in Rio Bravo will be built on land that was formerly used for a basketball park. Other elements of the project will be built on road rights-of-way, easements, or agricultural land. The total cost for all the elements of the proposed action is estimated to be $29,200,000(US) over a 20-year period, at an exchange rate of 10.8 Mexican pesos per U.S. dollar.

4.0 MAPS AND AGENCIES CONTACTED

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
Natural Resources Conservation Service
National Park Service
International Boundary and Water Commission
Border Environment Cooperation Commission
North American Development Bank
Texas Historical Society
Texas Commission on Environmental Quality
Texas Water Development Board
Texas Parks and Wildlife Department
Coastal Zone Management
Hidalgo County Floodplain Coordinator
Secretaría de Comunicaciones y Obras Públicas
Secretaría de Planeación y Evaluación
Secretaría del Medio Ambiente, Recursos Naturales
Secretaría de Desarrollo Urbano y Ecología
Comisión Internacional de Límites y Aguas
Comisión Estatal del Agua de Tamaulipas
Comisión Estatal de Agua Potable y Alcantarillado
Comisión Nacional del Agua, Subdirección General Técnica
Comisión Municipal de Agua Potable y Alcantarillado
Junta de Administración, Operación y Mantenimiento
Instituto Nacional de Antropologia e Historia

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